

Lovell Lumber Company, Inc.)	Departmental
Oxford County)	Findings of Fact and Order
Lovell, Maine)	Air Emission License
A-676-71-D-R)	

After review of the air emissions license renewal application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

Lovell Lumber Company, Inc. (Lovell) of Lovell, Maine has applied to renew their Air Emission License permitting the operation of emission sources associated with their Lovell, Maine sawmill and Planer-mill.

B. Emission Equipment

Lovell is authorized to operate the following equipment:

Fuel Burning Equipment

<u>Equipment</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Maximum Firing Rate</u>	<u>Fuel Type, % sulfur</u>	<u>Date of Manufacture</u>	<u>Stack #</u>
Diesel #1	5.5	40.4 gal/hr	Diesel, 0.05%	1998	#1
Diesel #2	1.2	9.0 gal/hr	Diesel, 0.05%	1993	#1
Diesel #3	5.5	40.4 gal/hr	Diesel, 0.05%	1993	#1
Boiler #4	8.6	1920 lb/hr	Wood	1982	#4
Boiler #5	5.2	37.5 gal/hr	Diesel, 0.05%	1984	#5

Process Equipment

<u>Equipment</u>	<u>Production Rate</u>	<u>Pollution Control Equipment</u>
Kiln #1	4.5 MMBF/yr	none

C. Application Classification

The application for Lovell Lumber does not include the licensing of increased emissions or the installation of new or modified equipment. Therefore, the license is considered to be a renewal of current licensed emission units only.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Chapter 100 of the Department regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emission from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. Facility Description

Lovell is a sawmill and planer-mill facility that produces kiln-dried and surfaced eastern white pine lumber. Eastern white pine logs enter the facility and are measured and sent to a storage area. The logs are removed from the storage area in a first in/first out order and sent to the debarker where the bark is removed from the logs. The debarked logs are then sent to the sawmill and the remaining bark is stored and eventually sold as bark mulch.

Lovell operates one double cut bandsaw which does the initial board cutting. The rough cut boards are sent through an edger and trimmer, then graded and sorted. Sawdust from the sawmill is collected with cyclones and stored in a silo to be used as fuel in the wood fired boiler. The boiler produces steam to heat the buildings and the drying kiln. Larger waste wood pieces from the sawmill are chipped and sold to the paper industry.

The boards are dried for two weeks in the kiln or for 3-4 months if they are air dried in the lumber yard. Dried boards are sent to the planer-mill. Here the lumber is trimmed to exact length, smoothed, and any molding or joining cuts are done.

Shavings from the planing process are blown to the bagger house, bagged and sold as animal bedding. Sawdust and chipped ends from the planing process are fed to the wood fuel silo, for use as fuel in the wood fired boiler. From the planer-mill, the boards are sent to storage to await shipment.

Lovell operates Boilers #4 and #5 as the principle heat source for the facility's drying kilns and sawmill and planer-mill buildings. Boiler #4 is a wood fired boiler and Boiler #5 fires diesel fuel. Lovell also operates three diesel generators (one primary and two back-ups) to produce power for their facility. Lovell is required to fire diesel fuel with a sulfur content of no greater than 0.05% sulfur by weight.

C. Boilers #4 and #5

Lovell operates Boilers #4 and #5 as the principle heat source for the facility's drying kilns and sawmill and planer-mill buildings. The design heat input capacity for Boilers #4 and #5 each is below the applicability threshold for EPA New Source Performance Standards (NSPS) 40 CFR, Subpart Dc, for boilers with a maximum design heat input capacity of 10 MMBtu/hr or greater and manufactured after June 9, 1989.

1. Boiler #4

Boiler #4 is a wood-fired low-pressure boiler, manufactured in 1982 with a maximum design heat input of 8.6 MMBtu/hr. Boiler #4 exhausts through Stack #4.

Boiler #4 makes use of a cyclone to control particulate emissions exhausting from the wood-fired boiler. Lovell shall establish an inspection/maintenance program for the Boiler #4 cyclone which shall allow for periodic emptying of the cyclone drop container when the drop container is full. The inspection/maintenance program shall also allow for monthly visual inspections of the cyclone shell and drop point to inspect for any fractures or holes in the cyclone shell that would effect its operation and to determine the necessity of emptying the drop container. Lovell shall record the dates and findings of monthly visual inspections as well as any necessary maintenance and drop container emptying in an inspection/maintenance log.

Lovell is restricted to firing no greater than 7,570 tons of wood per year (ton/yr) of 50% moisture wood or equivalent, based on a twelve-month rolling total. Lovell shall maintain a fuel use record which demonstrates compliance with the facility's fuel consumption restriction for Boiler #4. The fuel use record shall be maintained on a monthly as well as a twelve-month rolling total basis.

A summary of the BPT analysis for boiler #4 (8.6 MMBtu/hr) is as follows:

1. MEDEP Chapter 103 regulates PM emission standards for wood fired boilers. Based on MEDEP Chapter 103, the BPT emission factor for PM for Boiler #4 shall be 0.3 lb/MMBtu. PM₁₀ emission limits are based on PM limits.
2. Emissions from boiler #4 shall be vented through a cyclone before entering stack #4.
3. SO₂, NO_x, CO and VOC emission limits are based upon AP-42 data dated 7/01 for wet-wood fired boilers.
4. Visible emissions from Stack #4 shall not exceed 30% on a 6-minute block average, except for no more than 2 six-minute block averages in a 3-hour period.

2. Boiler #5

Boiler #5 is a Clever Brooks boiler, manufactured in 1984 with a maximum design heat input of 5.2 MMBtu/hr. Boiler #5 exhausts through Stack #5.

As per Lovell's previous air emission license (A-676-71-C-R), Lovell is restricted to a facility wide diesel fuel oil limit of 155,000 gallons per year (gal/yr) based on a twelve-month rolling total. This restriction includes fuel fired in Boiler #5 and the facility's diesel engines. Lovell has not requested a change in this restriction and therefore shall continue to be subject to this restriction. Lovell shall maintain a fuel use record which demonstrates compliance with the facility's diesel fuel restriction. The fuel use record shall be maintained on a monthly as well as a twelve-month rolling total basis.

A summary of the BPT analysis for boiler #5 (5.2 MMBtu/hr) is as follows:

1. MEDEP Chapter 103 establishes PM emissions standards for oil fired boilers. Based on MEDEP Chapter 103, the BPT emission factor for PM for Boiler #5 shall be 0.12 lb/MMBtu. PM₁₀ emission limits are based on PM limits.
2. BPT for diesel fuel oil is a sulfur content of 0.05% by weight.
3. NO_x emission limits are based on performance data from similar diesel fuel oil fired boilers of this size and age and manufacturer's data:
BPT emission factor for NO_x for diesel fuel oil is 0.3 lb/MMBtu.
4. CO and VOC emission limits are based upon AP-42 data dated 9/98 and performance data from the boiler's manufacturer.
5. Visible emissions from Stack #5 shall not exceed 20% opacity on a (6) six-minute block average except, for no more than 2 six-minute block averages in a 3-hour period.

D. Diesel Units #1, #2 and #3

Diesel Units #1, #2 and #3 were manufactured in 1998, 1993 and 1993 and have maximum heat input capacities of 5.5 MMBtu/hr, 1.2 MMBtu/hr and 5.5 MMBtu/hr respectively, firing diesel fuel with a sulfur content of no greater than 0.05% sulfur by weight. All three diesels exhaust to a common stack, designated Stack #1.

As discussed above, Lovell is restricted to a facility wide diesel fuel restriction of 155,000 gal/yr based on a twelve-month rolling total. The fuel use restriction includes fuel consumed in the diesel engines as well as Boiler #5.

A summary of the BPT analysis for Diesel Units #1, #2 and #3 is the following:

1. MEDEP Chapter 103 regulates PM emission standards from diesel units #1 and #3, for diesels greater than 3 MMBtu/hr. PM₁₀ emission limits are based on PM limits.
2. BPT for diesel fuel oil is a sulfur content of 0.05% by weight.
3. NO_x, CO and VOC emission limits for diesel units #1 and #3 are based on AP-42 data dated 10/96 for diesel units larger than 600 hp; PM, NO_x, CO and VOC emission limits for diesel unit #2 are based on AP-42 data dated 10/96 for diesel units smaller than 600 hp.
4. Visible emissions from Diesel units #1, #2 and #3 (Stack 1) fired individually shall not exceed 20% on a 6-minute block average. Opacity from diesel units #1, #2 and #3 fired in combination shall not exceed 30% opacity on a 6-minute block average, except for no more than 2 six minute block averages in a 3-hour period.

E. Drying Kilns

Lovell currently operates one kiln, designated Kiln #1, for green lumber drying. Kiln #1 has a 4.5 MMBF/yr through-put rate. Lovell shall maintain a record of wood drying. The record shall include the quantity of wood dried in the kilns indicating species and drying dates. The record shall also include the quantity of any wood air-dried, indicating species and drying dates. The record shall be maintained on a monthly as well as a twelve-month rolling total.

Lovell predominantly dries Eastern White Pine. Using the emission factor of 2.26 pounds of VOC per 1000 board feet for white pine and the current annual drying production from the Lovell kilns of 4.5 MMBF per year, Lovell emits approximately 2.8 tons of VOC per year from the kiln drying process.

F. Cyclone

Lovell makes use of cyclones to control particulate emissions from sawing and planing processes. Lovell shall establish an inspection/maintenance program for the process cyclones which shall allow for periodic emptying of the cyclone drop containers when the drop containers are full and for monthly visual inspections of the cyclone shells and drop points to inspect for any fractures or holes in the cyclone shell that would effect its operation and to determine the necessity of emptying the drop containers. Lovell shall record the dates and findings of monthly visual inspections as well as any necessary maintenance and drop container emptying in an inspection/maintenance log.

Visible emissions from the cyclone shall not exceed opacity of 10% on a 6-minute block average basis.

G. Annual Emission Restrictions

Lovell shall be restricted to the following annual emissions, based on a 12 month rolling total:

- Lovell is restricted facility wide to firing no greater than 155,000 gal/yr of diesel fuel oil with a maximum sulfur content not to exceed 0.05% by weight.
- Lovell is restricted to firing no greater than 7,570 ton/yr of 50% moisture wood or equivalent in Boiler #4 based on a twelve-month rolling total.
- Lovell is restricted to drying no greater than 4.5 MMBF/yr of lumber based on a twelve-month rolling total.

Total Allowable Annual Emission for the Facility
(used to calculate the annual license fee)

<u>Pollutant</u>	<u>Tons/Year</u>			
	Boilers	Diesels	Kiln	Total
PM	10.2	1.3	-	11.5
PM ₁₀	10.2	1.3	-	11.5
SO ₂	0.9	0.5	-	1.4
NO _x	7.5	34.0	-	41.5
CO	20.5	9.0	-	29.5
VOC	1.3	1.1	5.1	7.5

III.AMBIENT AIR QUALITY ANALYSIS

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a minor source shall be determined on a case-by case basis. Based on the information available in the file, and the similarity to existing sources, Maine Ambient Air Quality Standards (MAAQS) will not be violated by this source. Based on the total facility emissions, Lovell is below the emissions level required for modeling and monitoring.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-676-71-D-R subject to the following conditions:

Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

STANDARD CONDITIONS

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (Title 38 MRSA §347-C).
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115.

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- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both.
- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request.
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. §353.
- (6) The license does not convey any property rights of any sort, or any exclusive privilege.
- (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions.
- (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request.
- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license.
- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license.

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- (11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:
- (i) perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
 - a. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions;
 - or
 - b. pursuant to any other requirement of this license to perform stack testing.
 - (ii) install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
 - (iii) submit a written report to the Department within thirty (30) days from date of test completion.
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
- (i) within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
 - (ii) the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and

- (iii)the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.
- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement.
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emission and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation.
- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status.

SPECIFIC CONDITIONS

- (16) Boiler #4
- A. Lovell shall be limited to firing no greater than 7,570 ton/yr of 50% moisture wood or equivalent based on a twelve month rolling total in Boiler #4. Lovell shall maintain a fuel use record which demonstrates compliance with the facility's fuel consumption restriction for Boiler #4. The fuel use record shall be maintained on a monthly as well as a twelve-month rolling total basis. [MEDEP Chapter 115, BPT]
- B. Lovell shall establish an inspection/maintenance program for the Boiler #4 cyclone which shall allow for periodic emptying of the cyclone drop container when the drop container is full and for monthly visual inspections of the cyclone shell and drop point to inspect for any fractures or holes in the cyclone shell that would effect its operation and to determine the necessity of emptying the drop container. [MEDEP Chapter 115, BPT]

C. Emissions shall not exceed the following:

Equipment		PM	PM ₁₀	SO ₂	NO _x	CO	VOC
Boiler #4	lb/MMBtu	0.3	-	-	-	-	-
	lb/hr	2.6	2.6	0.2	1.9	5.2	0.3

[MEDEP Chapter 115, BPT]

D. Visible emissions from Stack #4 shall not exceed 30% on a 6-minute block average, except for no more than 2 six-minute block averages in a 3-hour period. [MEDEP Chapter 101]

- (17) Lovell shall be restricted to a facility wide diesel fuel oil limit of 155,000 gallons per year (gal/yr) based on a twelve-month rolling total with a sulfur content of no greater than 0.05% sulfur by weight. Lovell shall maintain a fuel use record which demonstrates compliance with the facility's diesel fuel restriction. The fuel use record shall be maintained on a monthly as well as a twelve-month rolling total basis. [MEDEP Chapter 115, BPT]

- (18) Boiler #5

A. Emissions from Boiler #5 shall not exceed the following:

Equipment		PM	PM ₁₀	SO ₂	NO _x	CO	VOC
Boiler #5	lb/MMBtu	0.12	-	-	-	-	-
	lb/hr	0.6	0.6	0.3	1.6	0.2	0.01

[MEDEP Chapter 115, BPT]

B. Visible emissions from stack #5 shall not exceed 20% opacity on a 6-minute block average except, for no more than 2 six-minute block averages in a 3-hour period. [MEDEP Chapter 101]

- (17) Diesel Units #1, #2 and #3

A. Emissions from Diesels #1, #2 and #3 shall not exceed the following:

Equipment		PM	PM ₁₀	SO ₂	NO _x	CO	VOC
Diesel #1	lb/MMBtu	0.12	-	-	-	-	-
	lb/hr	0.65	0.65	0.3	17.4	4.6	0.5
Diesel #2	lb/hr	0.4	0.4	0.06	5.4	1.2	0.4
Diesel #3	lb/MMBtu	0.12	-	-	-	-	-
	lb/hr	0.65	0.65	0.3	17.4	4.6	0.5

[MEDEP Chapter 115, BPT]

- B. Visible emissions from Diesel units #1, #2 and #3 (Stack 1) fired individually shall not exceed 20% on a 6-minute block average. Opacity from diesel units #1, #2 and #3 fired in combination shall not exceed 30% opacity on a 6-minute block average, except for no more than 2 six minute block averages in a 3-hour period. [MEDEP Chapter 101]
- (18) Drying Kilns
- A. Lovell shall be restricted to drying no greater than 4.5 MMBF/yr of lumber based on a twelve-month rolling total. [MEDEP Chapter 115, BPT]
- B. Lovell shall maintain a record of wood drying. The record shall include the quantity of wood dried, indicating species and drying dates. The record shall be maintained on a monthly as well as a twelve-month rolling total. [MEDEP Chapter 115, BPT]
- (19) Cyclones
- A. Visible emissions from any process cyclone shall not exceed opacity of 10% on a 6-minute block average basis. [MEDEP Chapter 101]
- B. Lovell shall establish an inspection/maintenance program for the process cyclones which shall allow for periodic emptying of the cyclone drop containers when the drop containers are full and for monthly visual inspections of the cyclone shells and drop points to inspect for any fractures or holes in the cyclone shell that would effect its operation and to determine the necessity of emptying the drop containers. Lovell shall record the dates and findings of monthly visual inspections as well as any necessary maintenance and drop container emptying in an inspection/maintenance log. [MEDEP Chapter 115, BPT]
- (20) Visible emissions from any general process source shall not exceed opacity of 10% on a 6-minute block average basis, except for no more than 1 six-minute block average in a 1-hour period. [MEDEP Chapter 101]
- (21) Visible emissions from potential sources of fugitive particulate matter emissions, including material stockpiles and unpaved roadways, shall not exceed an opacity of 20 percent, except for no more than 5-minutes in any 1-hour period. Compliance shall be determined by an aggregate of the individual 15-second opacity observations which exceed 20 percent in any 1-hour. [MEDEP Chapter 101]

(22) Annual Emission Statement

In accordance with MEDEP Chapter 137, the licensee shall annually report to the Department by September 1, the information necessary to accurately update the State's emission inventory by means of:

- 1) A computer program and accompanying instructions supplied by the Department;
or
- 2) A written emission statement containing the information required in MEDEP Chapter 137.

Reports and questions should be directed to:

Attn: Criteria Emission Inventory Coordinator
Maine DEP
Bureau of Air Quality
17 State House Station
Augusta, ME 04333-0017

Phone: (207) 287-2437

- (23) Lovell shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (38 MRSA §605-C).

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(24) Lovell shall pay the annual air emission license fee within 30 days of December 31 of each year. Pursuant to 38 MRSA 353-A, failure to pay this annual fee in the stated timeframe is sufficient grounds for the revocation of the license under 38 MRSA 341-D, Subsection 3.

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2007.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
DAVID P. LITTELL, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

The term of this Order shall be for five (5) years from the signature above.

Date of initial receipt of application: **November 27, 2006**

Date of application acceptance: **December 5, 2006**

Date filed with the Board of Environmental Protection: _____

This Order prepared by, Peter G. Carleton, Bureau of Air Quality